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67237

5(3)

SOV/55-59-1-18/28

AUTHORS: Eventova, M. S., Borisov, P. P., Sagalovich, A. V.TITLE: Oxidation of Aromatic Hydrocarbons With Oxygen, Oxidation of n-Butyl Benzene ↑

PERIODICAL: Vestnik Moskovskogo universiteta. Seriya matematiki, mekhaniki, astronomii, fiziki, khimii, 1959, Nr 1, pp 151-154 (USSR)

ABSTRACT: Investigations by K. I. Ivanov (Ref 1) concerning oxidative formation of a hydrogen peroxide compound from n-butyl benzene have shown that the oxidation takes place on the carbon atom that is in α -position to the phenyl group. This behavior of n-butyl benzene in oxidation was checked here. Within three hours, the n-butyl peroxide was oxidized to 25.8% at 160°. The authors used an apparatus of MGU (Moscow State University). The reaction products indicated that oxidation in fact sets in at this temperature, and that the carbon chain may break on both sides of the oxidized carbon atom (formation of phenol and an aldehyde with further oxidation to butyric acid, formation of benzoic acid and butyl alcohol). The ketone formation (butyrophenone) does not take place as the main reaction as was found in other oxidations (ethyl- and propyl benzene). The butyrophenone itself is further oxidized only to a small extent.

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SOV/55-59-1-18/28

Oxidation of Aromatic Hydrocarbons With Oxygen , Oxidation of n-Butyl Benzene

It decomposes under the rupture of the C-C bond between the phenyl- and carbonyl group. The existence of the hydrogen peroxide was proven by iodine titration. The resultant reaction products were analyzed by the method described in reference 5. There are 1 figure, 1 table, and 7 references, 5 of which are Soviet. 4

ASSOCIATION: Kafedra khimii nefiti (Chair of Petroleum Chemistry)

SUBMITTED: January 21, 1958

Card 2/2

L 61503-65 ENT(m)/EMP(w)/EWA(d)/T/EMP(t)/EMP(z)/EMP(b) MJW/JD
ACCESSION NR: AP5012500 UR/0032/65/031/005/0603/0606
620.178.2

2/
20
B

AUTHORS: Borisov, P. P.; Anuchkin, M. P.

TITLE: Method for investigating up to brittle failure the resistance of steel having different amounts of stored elastic energy

SOURCE: Zavodskaya laboratoriya, v. 31, no. 5, 1965, 603-606

TOPIC TAGS: impact strength / metal property, fracture strength / 19G steel

ABSTRACT: Apparatus and methodology were developed to study the effects of stored elastic energy on the impact strength of metals as suggested by M. P. Anuchkin (Prochnost' magistral'nykh truboprovodov. Gostoptekhnizdat, 1963). The specimens (see Fig. 1 on the Enclosure) with cross sections of 5 x 10 or 10 x 10 mm, $\rho = 1$ mm and notch depth = 2 mm can be axially preloaded with the help of replaceable springs. These permit the evaluation of the impact strength from the formation and growth of cracks for different amounts of stored energy (spring stiffness variable 1500-100 kg/mm which corresponds to stored energy of 1.2-15 kg·m). The apparatus makes it possible to determine the energies absorbed by the specimens in forming cracks (of 0.5 mm); cracks of critical length, the

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ACCESSION NR: AP5012500

sensitivity to local plastic deformation, angle of bend before failure, deformed volume of metal, and type of break. Tests with low alloy steel 19G showed that with increased energy storage and increased tensile stress, the resistance to failure decreased. The absorbed energy decreased from 6.6-5.8, 5.1-4.4 and 4.4-3.3 kg·m/cm² as the elastic energy was increased from 2-10 kg·m for stresses of 15, 30, and 40 kg/mm² respectively. No other data are presented. Orig. art. has: 4 figures and 3 formulas.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut po stroitel'stvu magistral'nykh truboprovodov (All-Union Scientific Research Institute for Pipeline Construction)

SUBMITTED: 00

ENCL: 01

SUB CODE: MM

NO REF SOV: 003

OTHER: 001

Card 2/3

L 61503-65
ACCESSION NR: AP5012500

ENCLOSURE: 01

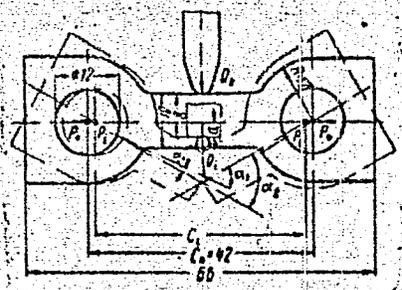


Fig. 1.

Test samples (o, i - initial and instantaneous subscripts)

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Card 3/3

EVENTOVA, Mariya Solomonovna; BORISOV, P.P., prof., red.; DANILOVA,
T.A., red.; GEORGIYEVA, G.I., tekhn. red.

[Brief manual for laboratory testing of lubricants] Kratkoe ru-
kovodstvo k prakticheskim zaniatiam po smazochnym maslam. Pod
red. P.P.Borisova. Moskva, Izd-vo Mosk. univ., 1961. 130 p.
(MIRA 15:2)

(Lubrication and lubricants—Testing)

BORISOV, P.V., vrach (Novosibirsk)

Health education in the home. Fel'd. i akush. 21 no.7:49-52 J1 '56.
(PUBLIC HEALTH, RURAL) (MIRA 9:10)

AGURIN, A.P.; BORISOV, P.V., inzh.; VOLYNTSEV, inzh.; GOYKOLOV, Ye.F.,
GROMAKOV, G.P.; SEREBRENNIKOV, S.S., inzh.; TOLKACHEV, P.I.,
inzh.; TYULENEVA, L.M., red.izd-va; MEDVEDEV, I.Ya., tekhn.
red.; EL'KINA, E.M., tekhn.red.

[Handbook on refractory linings of industrial furnaces] Spra-
vochnik po ogneupornoj kladke promyshlennykh pechei. Moskva, Gos.
izd-vo lit-ry po stroit., arkhitekt. i stroit.materialam, 1960.
349 p. (MIRA 13:5)

1. SOYUZTEPLOSTROY, trust, Moscow. 2. Ordena Trudovogo Krasnogo
Znameni trest Soyuzteplostroy (for all except Tyuleneva, Medvedev,
El'kina).
(Furnaces) (Refractory materials)

BEL'SKIY, V.I.; BORISOV, V.V.; VOLYNTSEV, V.A.; GOYKOLOV, Ye.F.; ZHOVNI-ROVSKIY, M.V.; ISSERS, A.Ye.; MAKAROV, M.S.; ROTNITSKIY, M.L.; TEBEN'KOV, B.P.; TROITSKIY, V.A.; CHERNOV, A.V., inzh.; AGURIN, A.P., nauchnyy red.; SOLODENNIKOV, L.D., nauchnyy red.; TOLKACHEV, P.I., nauchnyy red.; KHLUDYEVA, Ye.O., red.izd-va; EL'KINA, E.M., tekhn.red.

[Handbook on special operations; construction of industrial furnaces] Spravochnik po spetsial'nym rabotam; sooruzhenie promyshlennykh pechi. Pod red. A.V.Chernova. Izd.3., ispr. i dop. Moskva, Gos.izd-vo lit-ry po stroit., arkhitekt. i stroit.materialam, 1960. 694 p. (MIRA 13:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy i proyektnyy institut "Teploproyekt."
(Furnaces--Construction)

BORISOV, Pavel Vasil'yevich; GOYKOLOV, Yevgeniy Fedorovich; GROMAKOV, Gavriil Petrovich; SEREBRENNIKOV, S.S., nauchnyy red.;
VDOVENKO, Z.I., red. izd-va; KOROBKOVA, N.I., tekhn. red.;

TARAKHOVA, K.Ye., tekhn. red.

[Construction of open-hearth furnaces]Klakda martenovskikh pe-
chei. Moskva, Gosstroizdat, 1962. 158 p. (MIRA 15:12)
(Open-hearth furnaces)

BORISOV, P.V.. inzh.; KRITSKIY, G.G.

Lining the blast heaters of blast furnaces with large refractory blocks. Mont. i spets. rab. v stroi. 24 no.1:9-12 Ja '62.

(MIRA 15:7)

1. Trest Soyuzteplostroy i Ust'-Kamenogorskoye upravleniye Soyuz-
teplostroya.

(Blast furnaces)

(Refractory concrete)

BORISOV, P.F.

On the possibility of forecasting the Irtysh River break-up
time depending on the changes in solar activity. Izv. Omsk.
otd. Geog. ob-va no. 6833-38 '66. (MIRA 18:9)

BORISOV, P.V.

Changes in the breakup and freezing time of the Irtysh
in connection with the warming of the climate. Izv. Omsk.
otd. Geog. ob-va no.5:17-21 '63. (MIRA 17:5)

BORISOV, R.

Rush toward stars. Grazhd.av. 20 no.12:19-20 D '63. (MIRA 17:2)

1. Nauchnyy obozrevatel' zhurnala "Grazhdanskaya aviatsiya".

BORISOV, R. I.

BORISOV, R. I. -- "Stable Non-Symmetrical Systems with Part-Phase Operation of Long Electric-Power Transmission Lines." Min Higher Education USSR. Tomsk Order of Labor Red Banner Polytechnic Inst imeni S. M. Kirov. Tomsk, 1955. (Dissertation for the Degree of Candidate of Technical Sciences.)

SO: Knizhnaya letopis', No. 4, Moscow, 1956

BORISOV, R.I.

Possibility of using series compensation and phase control in intersystem tie lines up to a length of 1,500 kilometers. Izv. Sib. otd. AN SSSR no.6:82-86 '58. (MIRA 11:9)

1. Tomskiy politekhnicheskii institut.
(Electric lines)

BORISOV, R.I., kand.tekhn.nauk

Computation of operating conditions of electric nets taking the effect of voltage on load power into account. Izv.vys. ucheb.zav.; energ. 2 no.6:1-11 Je '59. (MIRA 13:2)

1. Tomskiy ordena Trudovogo Krasnogo Znameni politekhnicheskoy institut imeni S.M.Kirova. Predstavlena kafedroy elektrostantsiy, setey i sistem.
(Electric networks)

VOROB'YEV, A.A., doktor fiziko-matematicheskikh nauk, prof.;
BORISOV, R.I., kand.tekhn.nauk, dotsent; TOLPYGO, O.B.,
~~kand.tekhn.nauk, dotsent~~; KALYATSKIY, I.I.

"High-voltage engineering," Part 3, No.1: "Wave processes
and internal overvoltages in electrical systems" by L.I.
Sirotinskii. Reviewed by A.A. Vorob'ev and others.
Elektrichestvo no.5:89-90 My '61. (MIRA 14:9)
(Electric power distribution--High tension)
(Sirotinskii, L.I.)

BORISOV, R.I.

Choice of optimum parameters of compensating devices for a long-
distance power transmission line coupled with intermediate systems.
Trudy Transp. energ. inst. Sib. otd. AN SSSR no.14:130-125 '62.
(MIRA 16:9)

(Electric power distribution)
(Interconnected electric utility systems)

BORISOV, S., doktor tekhn.nauk; PIKINER, Yu.

Story about large pipes. NTO 6 no.1:48-50 Ja '64. (MIRA 17:2)

1. Predsedatel' sojeta Nauchno-tehnicheskogo obshchestva Ukrainkogo nauchno-issledovatel'skogo trubnogo instituta (for Borisov). 2. Uchenyy sekretar' sojeta Nauchno-tehnicheskogo obshchestva Ukrainkogo nauchno-issledovatel'skogo trubnogo instituta (for Pikiner).

BORISOV, S.

Detectors for gas losses. St si Teh Buc 14 no.3:5 Mr '62

BORISOV. S.

USSR (600)

Butter

Improving the quality of butter. Mol. prom. 13 no 5, May 1952

9. Monthly List of Russian Accessions, Library of Congress, August 195~~6~~, Uncl.
2

BORISOV, S.

KIVENKO, S.F.; LUK'YANOV, N.Ya.; PAKHIRKO, A.A.; BEZDENEZHNYKH, V.,
retsensent; BORISOV, S., retsensent; KOSTYGOV, V.V., redaktor;
AKIMOVA, A.D., redaktor; GOTLIB, E.M., tekhnicheskiy redaktor.

[Production of condensed and powdered milk in butter plants] Proiz-
vodstvo zgushchennogo i sukhogo moloka na maslodel'nykh zavodakh.
Pod red. V.V.Kostygova. Moskva, Pishchepromizdat, 1954. 153 p.
(Milk, Condensed)(Milk, Dried) (MLRA 8:3)

1. BCRI3CV, S.
2. USSR (600)
4. Landscape Gardening - Klin District
7. Master of Landscaping. Sel'. Stroi. 2. no. 2. 1947.

9. Monthly List of Russian Accessions, Library of Congress, March 1953, Uncl.

Borisov
Country : BULGARIA
Category : Chemical Technology. Ceramics. Binding Materials
Concrete
Abs. Jour : Ref Zhur-Khimiya, No 14, 1959, No 50459
Author : Nikolov, S.; Borisov, S.
Institute : -
Title : Quality Control of Structural Materials with
the Aid of Gamma-Rays
Orig Pub. : Stroitelstvo, 1958, 5, No 8, 22-23
Abstract : As a source of γ -rays, Co⁶⁰ was employed,
materials tested were standard samples of
concrete having different W/C ratios, content
of cement, and granulometrical composition of
fillers. It was found that the intensity of
 γ -ray flow varies considerably, especially
during the first period of concrete hardening
because of the loss of water. Then it stabi-
lizes and becomes constant by the time crystals
Card: 1/2
11-55

Country :		H-13
Category :	Chemical Technology.	
Abs. Jour :	Ref Zhur-Khimiya, No 14, 1959, No	50459
Author :		
Institute :		
Title :		
Orig Pub. :		
Abstract :	comprizing concrete are formed. The radiomet-	
Con'd	rical method permits controlling the quality	
	of concrete and of many other structural	
	materials.-- Ya. Satunovskiy	
Card:	2/2	

SOV/130-58-10-13/18

AUTHORS: Bogolyubskiy, N., Borisov, S., et al.

TITLE: Grigoriy Markelovich Il'in - Obituary

PERIODICAL: Metallurg, 1958, Nr.10, p.36. (USSR)

ABSTRACT: In 1921 Il'in started work in the "Serp i Molot" factory as a furnace operator, then as a foreman of the open hearth furnace shop. He was the first to introduce rapid repairs of open-hearth furnaces, in 8 days instead of 2 to 3 months. He wrote two books which are still considered valuable technical manuals. In 1938 he became director of "Serp i Molot", a post which he retained until he died in 1958 at the age of 64. He was awarded the Stalin Prize and a number of other prizes.

Card 1/1

BEZVERKHOV, N.; BORISOV, S.

Our experience in training students for practical work in railway transportation. Politekh.obuch. no.12:81-82 D '59.
(MIRA 13:5)

1. Zholoznodorozhnaya srednyaya shkola No.67, stantsiya Kazatin.
(Railroads--Employees--Education and training)

ANISIMOV, A.; BORISOV, S.; BUKIN, A.; BURLAKOV, M.

New work on the finances of capitalism ("Finances of capitalistic states." Reviewed by A. Anisimov and others). Fin. SSSR 21 no.9: 79-82 S '60. (MIRA 13:9)

(Finance)

BORISOV, S.

Instrument detects leakage. Nauka i zhizn' 27 no.10:39 0 '60.

(MIRA 13:10)

(Vacuum apparatus--Testing)

(Gas detectors)

Borisov, S.A.

CHEKMAR'EV, Yakov Fedorovich, sostavitel'; BOGDANOV, I.M., uchitel' matematiki; MODEL', A.Ya., uchitel'; GNUSOV, N.V., uchitel'; PAVUK, T.I., uchitel'nitsa; ZDRAVOMYSLOVA, N.K., uchitel'nitsa matematiki; BORISOV, S.A., uchitel' matematiki; KITAYGORODSKIY, P.I., uchitel' matematiki.

[Teaching mathematics in the schools for young workers] Iz opyta prepodavaniia matematiki v shkolakh rabochei molodezhi; sbornik statei. Moskva, Izd-vo Akademii pedagog. nauk **BSFSR**, 1952. 128 p. (MLRA 6:5)

1. Akademiya pedagogicheskikh nauk **BSFSR**, Institut metodov obucheniya.
2. Shkola rabochey molodyezhi No 52, Moskva (for Bogdanov).
3. Shkola rabochey molodyezhi No 31, Leningrad (for Model').
4. Shkola rabochey molodyezhi No 4, Moskva (for Gmusov).
5. Shkola rabochey molodyezhi No 65, Moskva (for Pavuk).
6. Shkola rabochey molodyezhi No 71, Leningrad (for Zdravomyslova).
7. Shkola rabochey molodyezhi No 32, Moskva (for Borisov).
8. Shkola rabochey molodyezhi No 45, Moskva (for Kitaygorodskiy).
(Mathematics--Study and teaching.)

Borisov, S.A.

VOLYNTSEV, Ye., zasluzhennyy uchitel' shkol Rossiyskoy Sotsialisticheskoy Federativnoy Sovetskoy Respubliki (Moscow); GOLUBEV, K. (Moscow); KISELEVA, A. (Moscow) [reviewers]; BOGDANOV, N.M.; BORISOV, S.A.; ERISHOV, I.S.; STRATILATOV, P.V. [authors].

New methodological manual for schools for the working youth ("Problems in teaching mathematics in the 5th - 10th grades of schools for the working youth." N.M.Bogdanov, S.A.Borisov, I.S.Ershov, P.V.Stratilatov. Reviewed by E.Volyntsev, K.Golubev, A.Kiseleva).
Mat.v shkole no.6:74-75 N-D '53. (MLRA 6:12)

(Mathematics--Study and teaching) (Technical education)
(Bogdanov, N.M.) (Borisov, S.A.) (Ershov, I.S.) (Stratilatov, P.V.)

KARPOV, S.T.; BORISOV, S.A.

Important production potentialities. Tekst.prom. 21 no.9:29-31
S '61. (MIRA 14:10)

1. Direktor Karabanovskogo khlopchatobumazhnogo kombinata imeni
III Internatsionala (for Karpov). 2. Glavnyy inzh. Karabanovskogo
khlopchatobumazhnogo kombinata imeni III Internatsionala (for
Borisov).

(Textile industry--Equipment and supplies)

13

CA

PROCESSES AND PROPERTIES INDEX

Methods of preparing polychlorovinyl resins. A. A. Surov and S. A. Borisov. *Org. Chem. Ind. (U. S. S. R.)* 7, 060-61 (1940).—A brief review of methods for prep. vinyl chloride by (1) reaction of dichloroethane with alc. alkali and (2) addn. of HCl to acetylene, also polymerization of vinyl chloride by emulsion, alc. and photo-polymerization methods. R. Z. Kamich

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

ALERSAIDROV, B.P.; ANDREYEV, G.A.; BORISOV, S.A. [deceased]; IVANOV, I.A.

Increasing the accuracy and speed of the flotation determination
of single crystal density. Zav.lab. 28 no.6:707-709 '62.
(MIRA 15:5)

1. Fiziko-tekhnicheskii institut imeni A.F. Ioffe AN SSSR.
(Crystals)

KARPOV, S.T.; BORISOV, S.A.; SKOMOROKHOV, K.M.

Increasing the size of weft packages for the ATK-100 looms.

Tekst.prom. 22. no.6:59 Je '62.

(MIRA 16:5)

1. Direktor khlopchatobumazhnogo kombinata imeni III Internatsionala Vladimirovskogo soveta narodnogo khozyaystva (for Karpov).
2. Glavnyy inzh. khlopchatobumazhnogo kombinata imeni III Internatsionala Vladimirovskogo soveta narodnogo khozyaystva (for Borisov).
3. Nachal'nik tkatskogo proizvodstva khlopchatobumazhnogo kombinata imeni III Internatsionala Vladimirovskogo soveta narodnogo khozyaystva (for Skomorokhov).

(Looms)

GRIMM, Aleksandr Ivanovich; BORISOV, Semen Borisovich; ALEKSEYEVA,
E.F., red.; BABICHEVA, V.V., tekhn.red.

[Diseases of stored fruits and vegetables] Bolezni plodov
i ovoshchei pri khraneni. Moskva, Gos.izd-vo torg.lit-ry,
1958. 71 p. (MIRA 13:1)

(Food--Storage)

BORISOV, S.D.; SEMENOV, V.Ye.

Underground storage of gas in the Kuybyshev Gas Trust. Gaz. prom.
no.11:38-40 N '58. (MIRA 11:11)
(Kuybyshev Province--Gas, Natural--Storage)

BORISOV, S.D.

Ways of improving the consumer gas supply. Gaz.prom. 5 no.10:22-25
0 '60. (MIRA 13:10)
(Kuybyshev Province--Gas distribution)

BORISOV, Sergey Dmitriyevich; GOR'KOVA, A.A., ved. red.; POLOSINA,
A.S., tekhn. red.

[Underground storage of gas; from the practice of the
Kuybyshev Economic Council] Podzemnoe khranenie gaza; iz
opyta raboty Kuibyshevskogo sovnarkhoza. Moskva, Gostop-
tekhizdat, 1962. 111 p. (MIRA 15:3)
(Gas--Storage)

MOSIN, M.I.; KATS, G.I.; SHEVYAKOV, L.D., akademik, red.; SHUKHARDIN, S.V., red.; AGOSHKOV, M.I., red.; BORISOV, S.F., red.; BYSTROV, N.M., red.; KISLOV, V.M., red.; KRAKHMALEV, M.K., red.; KUZNETSOV, N.A., red.; MAN'KOVSKIY, G.I., red.; MEL'NIKOV, N.V., red.; POLKOVNIKOV, A.A., red.; POPOV, K.S., red.; CHAYKIN, S.I., laureat Leninskoy premii, red.; **GOECHAROVA, Ye.A.**, tekhn. red.

[Kursk Magnetic Anomaly; history of the discovery study, and commercial development of iron-ore deposits. Collection of documents and materials in two volumes, 1742-1960] Kurskaia magnitnaia anomaliia; istoriia otkrytiia, issledovaniia i promyshlennogo osvoeniia zhelezorudnykh mestorozhdenii. Sbornik dokumentov i materialov v dvukh tomakh, 1742-1960. Belgorod, Belgorodskoe knizhnoe izd-vo. Vol.1. 1742-1926. 1961. 417 p. (MIRA 15:3)

(Kursk Magnetic Anomaly--Iron ores)
(Magnetic prospecting)

BORISOV, S.F., otv. red.

[Hydrogeology and drainage of the Kursk Magnetic Anomaly]
Gidrogeologiya i osushenie mestorozhdenii KMA. Moskva,
Nauka, 1964. 81 p. (NIRA 17:10)

1. Nauchno-issledovatel'skiy institut po problemam Kurskoy
magnitnoy anomalii.

BORISOV, S.F., *otv. red.*

[Geology of the northeastern band of the Kursk Magnetic
Anomaly] *Geologiya severo-vostochnoi polosy KMA. Moskva,*
Nauka, 1964. 61 p. (MIRA 17:11)

1. ~~Nauchno-issledovatel'skiy~~ institut po problemam Kurskoy
magnitnoy anomalii.

BORISOV, S. G.

BORISOV, S. G. -- "INVESTIGATION OF THE OPERATION OF AN AUTOMOBILE BRAKE OF THE SHOE TYPE." SUB 25 OCT 52, SCIENTIFIC COUNCIL OF STATE SCI RES AUTOMOBILE AND AUTOMOTIVE INST (NAMI) (DISSERTATION FOR THE DEGREE OF CANDIDATE IN TECHNICAL SCIENCE)

SO: VECHERNAYA MOSKVA, JANUARY-DECEMBER 1952

SKOTNIKOV, Viktor Vasil'yevich; VEDENYAPIN, G.A.,red.; LIPGART, A.A., otv. red.;
BORISOV, S.G.,red.; BRISKIN, M.I.,red.; DYBOV, O.V.,red.; ZIL'BERG, Ya.
G.,red.; KOZLOVSKIY, I.S.,red.; LOZAR', A.S.,red.; LUNEV, I.S., red.;
PEVZNER, Ya.M.,red.; PRYADILOV, V.I.,red.; RAMAYYA, K.S.,red.;
SAMOL', G.I.,red.; SEDOVA, Ye.V.,red.; KHANIN, N.S.,red.; CHAPAYEV,
A.A.,red.; GHISTOZVONOV, S.B.,red.; SHKOL'NIKOV, E.M.,red.;
YEGORKINA, L.I.,red.izd-va; SMIRNOVA, G.V.,tekh.n.red.

[Intermediate transformation and temper brittleness of auto-
mobile body steels] Promezhutochnoe prevrashchenie i otpuskaia
khrupkost' v konstruktsionnykh avtomobil'nykh staliakh. Moskva,
Gos.nauchno-tekh. izd-vo mashinostroit. lit-ry 1958. 74 p.
(Gosudarstvennyi nauchno-issledovatel'skii avtomobil'nyi i avto-
motornyi institut Trudy, no.85) (MIRA 12:2)
(Steel, Automobile---Metallography)

PETRUSHOV, V.A., inzh.; PASHIN, M.A., red.; LIPGART, A.A., otv.red.;
AL'PEROVICH, A.G., red.; BORISOV, S.G., red.; BRISKIN, M.I., red.;
DYBOV, O.V., red.; ZIL'BERBERG, Ya.G., red.; LOZAR', A.S., red.;
LUNEV, I.S., red.; NAGAYEV, P.V., red.; PEVZNER, Ya.M., red.;
PRYADILOV, V.I., red.; RAMAYYA, K.S., red.; SAMOL', G.I., red.;
SEDOVA, Ye.V., red.; TAMRUCHI, O.V., red.; KHANIN, N.S., red.;
CHAPCHAYEV, A.A., red.; CHISTOZVONOV, S.B., red.; SHKOL'NIKOV,
E.M., red.; YEGORKINA, L.I., red.izd-va; GORDEYEVA, L.P., tekhn.
red.

[Operational analysis of the multiplate friction transformer]
Analiz raboty mnogodiskovykh friktsionnykh transformatorov.
Moskva, Gos.nauchno-tekhn.izd-vo mashinostroitel'noi lit-ry,
1960. 79 p.(Moscow, Gosudarstvennyi nauchno-issledovatel'skii
avtomobil'nyi i avtomotorny institut [Trudy], no.90).

(MIRA 13:8)

(Motor vehicles--Transmission devices)

BORISOV, S.G.; KARPOV, L.N.; SOKOLOV, Yu.N.; KHORIN, A.D.; VAGNER,
A.K., nauchn. red.; RUNOVA, A.P., nauchn. red.; MARKOV,
L.A., red.; KOGAN, F.L., tekhn. red.

[Catalog-handbook "Motor vehicles of the U.S.S.R.;" motor
vehicles with special-purpose bodies and trailers] Katalog-
spravochnik "Avtomobili SSSR"; avtomobili so spetsializirovan-
nymi kuzovami i pritsepnoi podvizhnoi sostav. Moskva, Pt.2.
1963. 349 p. (MIRA 16:8)

1. Tsentral'nyy institut nauchno-tekhnicheskoy informatsii
po avtomatizatsii i mashinostroyeniyu.
(Motor vehicles--Catalogs) (Tractor trains--Catalogs)
(Truck trailers--Catalogs)

KISELEV, B.A., inzh.; LIPGART, A.A., otv.red.; PASHIN, M.A., red.; BORISOV, S.G., red.; BRISKIN, M.I., red.; RYZGOV, N.N., red.; DYBOV, O.V., red.; ZIL'BERBERG, Ya.G., red.; LOZAR', A.S., red.; LUNEV, I.S., red.; NAGAYEV, P.V., red.; PEVZNER, Ya.M., red.; PRYADILOV, V.I., red.; RAMAYYA, K.S., red.; SAMOL', G.I., red.; SEDOVA, Ye.V., red.; TAMRUCHI, O.V., red.; CHAPKEVICH, V.A., red.; CHISTOZVONOV, S.B., red.; SHKOL'NIKOV, E.M., red.; SMIRNOVA, G.V., tekhn.red.

[Investigation of the operation and gas-exchange of a loop-scavenged two-cycle motor-vehicle diesel engine] Issledovanie rabocheho protsessa i gazoobmena dyukhtaktnogo avtomobilnogo dizelia s petlevoi prodavkoi. Moskva, Mashgiz, 1961. {93 p. (Moscow. Gosudarstvennyi nauchno-issledovatel'skii avtomobil'nyi i avtomotorny i institut. Trudy, no.30)}. (MIRA 16:8)
(Motor vehicles--Engines)

S/137/61/000/006/051/092
A006/A101

AUTHORS: Borisov, S.I. Borisov, I.I.

TITLE: Nomograms of the machining time for piercing with diagonal rolls

PERIODICAL: Referativnyy zhurnal. Metallurgiya, no. 6, 1961, 37, abstract 6D301
("Tr. Ukr. n.-i. trubn. in-ta", 1959, no. 1, 16 - 18)

TEXT: To simplify the determination of machining time for piercing, it is suggested to use nomograms. Formula of machining time are derived and nomograms are presented for piercing mills of pilger installations 5 - 10" and 6 - 12", and also for piercing mills of the 5 - 14" ЛОТЗ (YUTZ) and 3 - 8" ПНТЗ (PNITZ) automatic units.

Yu. Manegin

[Abstracter's note: Complete translation]

Card 1/1

S/137/61/000/006/043/092
A006/A101

AUTHORS: Borisov, S.I., Strizhak, V.I.

TITLE: Determining deformation during the cold expansion of pipes

PERIODICAL: Referativnyy zhurnal. Metallurgiya, no. 6, 1961, 35, abstract 6D286
("Byul. nauchno-tekhn. inform. Ukr. n.-i. trubn. in-t", 1959, no.
6 - 7, 100 - 111)

TEXT: A formula is derived to determine deformations during cold expansion of pipes by the following 2 methods: expansion by compression or drawing. The formulae obtained are used for the plotting of graphs which describe the dependence of the wall thinning out and pipe shortening on the deformation in the diameter and the mandrel angle. An analysis of the graphs shows that during the expansion of pipes by compression the thinning out of the wall increases with a greater mandrel angle. Shortening of the pipe is correspondingly reduced. Thus, during the expansion of pipes by compression, the deformation in the diameter occurs mainly at the expense of the shortening of the pipe. During expansion of pipes by drawing, the deformation in the diameter

Card 1/2

Determining deformation ...

S/137/61/000/005/043/092
A006/A101

occurs mainly at the expense of the thinning out of the wall and less at the expense of the shortening of the pipe. With the aid of the graphs presented expansion conditions and the required blank may be selected, which meet the requirements to the finished pipe.

Yu. Manegin

[Abstracter's note: Complete translation]

Card 2/2

BORISOV, S.

Timely and useful book ("Foreign exchange problems of Western Europe"
by A.V.Anikin. Reviewed by S.Borisov). Den.i kred. 19 no.6:81-84
Je '61. (MIRA 14:6)

(Europe, Western—Balance of payments)
(Anikin, A.V.)

BORISOV, S.

Several problems in studying the balance of payments of capitalist
states. Fin.SSSR 22 no.5:77-86 My '61. (MIRA 14:5)
(Balance of payments)

BORISOV, S.I., kandidat tekhnicheskikh nauk; CHEPURKO, M.I., inzhener.

The production of bimetal tubes. Stal' 7 no.2:135-138 '47.
(MLRA 9:1)

1.Nauchno-issledovatel'skiy tekhnologicheskii institut.
(Metal drawing) (Pipe, Steel)

TRUBOPROKATNOE I TRUBOSVAROCHNOE PROIZVODSTVO.

Tube rolling and tube welding production.

A text-book for schools and foremen courses.

By P. T. Yemalyanenko, A. A. Shevchenko and S. I. Borisov.

Moscow, 1954.

Publishers Note:

Text-book, intended for foremen and technical school students.

The book contains brief data on the development of the tube industry in the U.S.S.R. The elements of the theory of longitudinal and inclined rolling (Mannermann) and the fundamental laws of plastic deformation are discussed. The problems of heating are illustrated and the design of heat installations used in tube plants is described.

Production processes most widely used in the manufacture of tubes are described in detail, namely, hot rolled seamless tubes, furnace-welded tubes and electrically welded tubes. The

Borisov, S. I.

137-1957-12-23781

Translation from: Referativnyy zhurnal, Metallurgiya, 1957. Nr 12. p 131 (USSR)

AUTHORS: Borisov, S. I., Orro, P. I.

TITLE: Prospects in the Production of Profiled Pipes and of Pipes of Variable Cross-section (Perspektivy proizvodstva fasonnykh trub i trub peremennogo secheniya)

PERIODICAL: V sb. : Ratsionalizatsiya profiley prokata. Moscow, Profizdat, 1956, pp 249-260

ABSTRACT: The application of profiled pipes (PP) and of pipes of variable cross-section (PVC) reduces the weight of the construction and preserves - and at times increases - the strength, rigidity, and stability of pipes (P) under load. When PP and PVC are used a decrease in weight of 20 - 70 percent may be achieved, and the manufacturing time may be reduced by 20 - 40 percent. The PP's and the PVC's are manufactured both from seamless and from electrically welded P's by means of hot rolling in pilger-mills and in continuous mills, by pressing on mechanical and hydraulic presses, by hot drawing without straightening, by cold drawing without straightening or with short straightening, by cold rolling

Card 1/2

137-1957-12-23781

Prospects in the Production of Profiled Pipes (cont.)

in pilger-mills, by spinning, and by distension. The PVC's are produced in electrical pipe-welding mills by means of welding together of preformed profile segments, while the PP's are obtained by shaping in rolling mills. The method of production is selected depending on the final shape required, the accuracy of the geometric dimensions, the quality of surface finish, and other requirements. A table of profiles and dimensions of PP's made in the USSR is shown. The number of available type sizes of P's is insufficient and, hence, the number of users is limited. The assortment of PP's may be expanded in accordance with the potential of the pipe-producing equipment. The problem of creating machinery for the straightening of the PP's involves many complications. Existing technical specifications and standards should be brought up to date and made more stringent. It is pointed out that the shapes of the PP's and PVC's manufactured abroad may also be reproduced in our plants, provided some supplementary equipment is installed.

I. M.

Card 2/2

1. Pipes-Profiled-Characteristics

Production of Thick-walled Large and Medium Diameter Seamless Tubes. S. I. Borisov. (Sov. 1958, (10), 905-908). (In Russian). The Soviet oil industry is the main consumer of the tubes (136-820 mm dia.) whose production in Pilger and automatic mills is compared in this article. The tube quality requirements of the oil industry are considered and it is concluded that several technological and design modifications of both types of mill must be carried out. — S. E.

BORISOV, S. I.

133-9-23/23

AUTHOR: Osada, Ya. Ye, Candidate of Technical Sciences and Borisov, S. I., Doctor of Technical Sciences.

TITLE: Investigations of the All Union Scientific Research Tube Institute (VNITI). (Issledovaniya Trubnogo Instituta (VNITI).)

PERIODICAL: Stal', 1957, No. 9, pp. 861 - 863 (USSR).

ABSTRACT: Summaries of the most important investigations carried out by the Institute in 1956 are given:

A) The development of the technology of production of straight seam-welded tubes for the gas pipe line Stavropol'-Moscow (together with TsNIChM, IES and Khartsyzsk Tube Works. (Khartsyzskiy Trubnyy Zavod).

B) The development of the technology and mastering of the production practice of electrically-welded under flux straight seam tubes on the Chelyabinsk Tube Rolling Works (Chelyabinskiy Truboprokatny Zavod). In both cases (A and B) steel 14XTC was used and a satisfactory technology of manufacturing was developed. C) The use of phosphatising for cold drawing of tubes (together with Lenin Works). Phosphatising for cold drawing with velocity of 50 m/min was successfully introduced. Similar phosphatising was also introduced on the Sinarskiy Tube Works (Sinarskiy Trubnyy Zavod).

Card 1/4 D) Mastering of the manufacture of tubes of a small, medium

133-9-23/23

Investigations of the All Union Scientific Research Tube Institute (VNITI).

and large diameter from some new medium and high alloy steels for boilers with super-high pressure of steam, (together with the Yuzhnotrubby Works). Two kinds of tubes were proposed: o.d. 32-42 mm, wall thickness 5-6 mm and o.d. 219-325 mm, wall thickness 30-50 mm. Tubes were to be used for steam superheaters and conduits of steam temperatures 540 - 650 °C. The following steels were experimentally rolled: a) for tubes of a large diameter: 15XMMΦ, 12XMP, 3A531, 3A724, 3A769, 3A770, 3A694 and 3A695; b) for tubes of a small diameter: 12XMP, 12XMP, 3A531, 3A769, 3A770 and 3A695. It was established that 1) for large diameter tubes the use of steel 15XMMΦ is possible, coefficient consumption of metal 1.4-1.6 and can be decreased; 3A531 possible but with a low yield (up to 50%), however, causes of the low yield are known and can be removed; steels 3A769, 3A770 and 3A724 - gave negative results; steels 3A694 and 3A695 can be used but some additional work is necessary for the completion of the development of the rolling technology; 2) for small diameter tubes: steel 15XMP satisfactory (already in large-scale production); steel 12XMP with Card2/4 boron and cerium possible but the technology of rolling requires

Investigations of the All Union Scientific Research Tube Institute
(VNITI). 133-9-23/23

improvement; steels 3M531 and 3M695 satisfactory, already in production; steel 3M769 and 3M770 - unsuccessful. E) The development of the technology of production in pilger and automatic mills of thin-walled tubes of a medium diameter, up to 325 mm (together with Libknekht, Zakavkazkiy and Yuzhnotrubby Works).

F) The production of specially thin-walled tubes of small diameter by cold rolling. A new technology of manufacturing thin-walled tubes (0.1 - 0.3 mm) of 19 to 55 mm diameter was developed. Simultaneous rolling of 2 - 4 tubes placed telescopically. No details given.

G) Metallisation of mandrels of piercing mills. Piercing end surfaced with a steel containing 3% of Ni. This increased durability by 1.5 - 2 times; moreover, an increase in the length of semis was possible (for 85 - 90 mm diameter from 850 - 980 mm to 1 600 mm and for 110 - 215 mm diameter up to 2 500 mm).

H) Improvement in the technology of production of tubes from stainless steels (jointly with NTZ).

I) Production of tubes from steel X23H18 (jointly with YuTZ).

Card3/4

J) New cold-rolling practices for tubes and improvement in roll pass designs (jointly with the Moscow Steel Institute (Moskovskiy

133-9-23/23

Investigations of the All Union Scientific Research Tube Institute (VNITI).

Institut Stali) and YuTZ).

K) The production of electrically-welded tubes using currents of a higher frequency (jointly with the Moscow Tube Works (Moskovskiy Trubnyy Zavod)). Currents from 50 to 350 c.p.s. were tested with satisfactory results.

L) Casting of tubes in chill moulds on a centrifugal machine (together with the Makeyevka Tube Works (Makeyevskiy Trubolit-eynny Zavod)).

M) Production of cold-drawn precision electro-polished tubes from stainless steel. A method of electro-polishing was developed. Internal and external surfaces are treated separately (no other details given).

N) Centrifugal casting of steel tubes (jointly with YuTZ). This method was found particularly advantageous for steels X20H14C2, 3M654, 3M769, 9M770, 3M853, W X15-Cr). Using radio-active elements, some special features of the distribution of elements across the wall thickness during the crystallisation of metal were studied. The behaviour of sulphur and phosphorus in the metal of a centrifugally-cast tube was established. (No details

Card4/4 given)

AVAILABLE: Library of Congress.

SOV/137-59-1-1777

Translation from: Referativnyy zhurnal. Metallurgiya, 1959, Nr 1, p 233 (USSR)

AUTHOR: Borisov, S. I.

TITLE: Energy Consumption in Automatic and Pilger-mill Methods of Pipe Manufacture and Means of Reducing it (Raskhod i puti ekonomii energii v avtomaticheskoi i pilgrimovoi sposobakh proizvodstva trub)

PERIODICAL: V sb.: Prokatn. i trubn. proiz-vo, Metallurgizdat, 1958, pp 314-337

ABSTRACT: In order to evaluate the consumption of energy in the automatic and Pilger-mill method of pipe manufacture, investigations were carried out in three pipe-manufacturing plants (the respective data are given). The following measures are recommended for purposes of reducing the consumption of energy: 1) Increasing the rolling speed and reducing the time required for associated operations. 2) Performing rolling operations on billets heated to maximum permissible temperatures. 3) Developing groove design which ensures a minimum consumption of energy. 4) Substituting rolling-contact bearings for the existing journal-type bearings; employing antifriction materials with a low

Card 1/2

SOV/137-59-1-1777

Energy Consumption in Automatic and Pilger-mill Methods of Pipe (cont.)

coefficient of friction, and including provisions for inspection of the lubrication system. 5) Continuous regulation of power consumption in every stand during idling. 6) A revision of the distribution of reductions among the stands so as to effect a decrease in energy consumption. 7) A revision of the design of the mechanical linkages in the system: motor-flywheel-speed reducer-reversing gear mechanism-rolling mill stand.

B. Ts.

Card 2/2

Translation from: Referativnyy zhurnal. Metallurgiya, 1958, Nr 12, p 172 (USSR) SOV/137-58-12-25246

AUTHORS: Borisov, S. I., Bernshteyn, M. M.

TITLE: Changes in the Mechanical Properties of 1Kh18N9T Stainless Steel in Relation to the Degree of Deformation During Cold Drawing (Izmeneniye mekhanicheskikh svoystv nerzhavayushchey stali marki 1Kh18N9T ot stepeni deformatsii pri kholodnom volochenii)

PERIODICAL: Byul. nauchno-tekhn. inform. Vses. n.-i. trubnyy in-t, 1958, Nr 4, pp 62-70

ABSTRACT: An investigation was made of the effect of different procedures of cold drawing and intermediate heat treatment on the mechanical properties of 1Kh18N9T steel in the manufacture of capillary, thin-walled, and precision tubes. A batch of 10 x 1 mm hollow ingots was divided into six groups. Each group was drawn under different conditions with a view of determining the reduction operation after which heat treatment of the tubes should be terminated. Specimens were taken from each group after each reduction in order to determine their mechanical and technological characteristics, namely: σ_b , δ , the bending stress corresponding to the beginning of residual deformation, the bending

Card 1/2

SOV/137-58-12-25246

Changes in the Mechanical Properties of 1Kh18N9T Stainless Steel (cont.)

moment, and the number of bendings. It was established that upon the cessation of heat treatment σ_b increases and attains its maximum after 7-10 reductions. At that point δ has a value of 2-2.5%, and further drawing of the tubes is feasible. With a lower value of δ the number of ruptures increases appreciably. Therefore, in the examined case of drawing of tubes with 0.6-1.5 mm outer diameter and walls 0.15 mm thick, the number of reductions without heat treatment should be limited to 7-10. On the basis of the findings of the work a diagram was constructed correlating that value of the draft μ which ensures the maximum strengthening of steel with the ratio of the wall thickness to the tube diameter, $\mu = 2.2 S/D$. The formula affords a means for tentative calculation of pass sizing during the drawing of thin-wall tubes with cold-hardened surface without preliminary experiments.

M. Sh.

Card 2/2

SOV/137-59-3-6962

Translation from: Referativnyy zhurnal. Metallurgiya, 1959, Nr 3, p 290 (USSR)

AUTHORS: Borisov, S. I., Bernshteyn, M. M.

TITLE: Permissible Reductions During Drawing of Small Pipes Without a Mandrel Based on Considerations of Their Stability With Regard to Buckling in the Area of Contact (Depustimyye velichiny obzhatiy pri bezopravochnom volochenii trub malykh razmerov s uchetom ustoychivosti formy trubyy v ochage deformatsii)

PERIODICAL: Byul. nauchno-tekhn. inform. Vses. n.-i. trubnyy in-t, 1958, Nr 4-5, pp 71-76

ABSTRACT: In order to determine the effect of the strength of the exit cross section on the magnitude of maximum deformation (D) of small pipes (P), the process of drawing of P's with a wall thickness-diameter ratio ($S/D \cdot 100\%$) of 4-30% was investigated at D's amounting to 47% per pass and at a velocity of drawing of 12 m/min. Graphs are presented showing the maximum D as a function of the ratio of wall thickness to the diameter (S/D ratio) of the P for various angles of cone-shaped entrance openings of the drawing dies. These graphs indicate that P's with ratios $S/D \cdot 100\% = 4-10\%$ and $S/D \cdot 100\% = 10-18\%$

Card 1/2

Permissible Reductions During Drawing of Small Pipes (cont.)

SOV/137-59-3-6962

may be drawn at D's of 35-40% and up to 25%, respectively. Correspondingly, at $S/D \cdot 100\% = 20-25\%$ and $S/D \cdot 100\% > 25\%$, the D must not exceed 18 and 10%, respectively. The optimal angle α of the inclination of the fibers amounts to 12° . The results of experiments dealing with resistance to buckling of P's within the draw plate during drawing without a mandrel demonstrated that in the case of drawing of thin-walled P's the degree of D is limited by the specific value of the S/D ratio rather than by the absolute values of the wall thickness and the diameter of the P. Graphs showing the D as a function of the ratio of the wall thickness to the diameter of the P demonstrate that at ratios $S/D \cdot 100\% = 2\%$, $S/D \cdot 100\% = 3\%$, and $S/D \cdot 100\% = 3.5\%$ the D must not exceed 10, 25, and 35%, respectively. At $S/D \cdot 100\% = 4\%$ the maximum D is already governed by the strength characteristics of the gripped end or of the final cross section of the P. A reduction in the resistance to buckling of the P in the draw plate is significantly affected by the shape of the pointed end and by the extent of variations in wall thickness of the P. Experimental results demonstrated that, compared with the D of P's with standard ends, the critical D of P's having cupped ends was 1.3 - 1.5 times greater.

M. K.

Card 2/2

133-58-5-18/31

AUTHOR: ~~Borisov, S. I.~~ Doctor of Technical Science

TITLE: Mastering of the Production of Alloy Tubes of Boiler Installations with High and Super-High Steam Parameters (Osvoeniye proizvodstva legirovannykh trub dlya kotel'nykh ustanovok s vysokimi i sverkhvysokimi parametrami para)

PERIODICAL: Stal', 1958, Nr 5, pp 442-446 (USSR)

ABSTRACT: The results of investigations carried out by VNITI and the Lenin and Yuzhnotrubby Works are given. Optimum conditions for the production of tubes from the following steels are described: A - large diameter tubes: 15KhIMIF, EI531 (12Kh2MFB); EI769, 770, 724, 694 and 695. B - small diameter tubes: 12KhMFR (with boron), EI695R, EI769, 770, 694, 695 and 531. Chemical compositions of steels investigated are given in the Table. The following participated in the work: from VNITI: I. A. Fomichev, Doctor of Technical Science, A.A. Shevchenko, Doctor of Technical Science, N. S. Alferova, A.S. Chukmasov, V. F. Vdovin, V. M. Yankovskiy, V. N. Rulla, V. S. Rudoy, M. I. Chepurko, Candidates of Technical Science, Card 1/2 A. G. Kravchenko, Yu. G. Solov'yev, V. P. Konvalov,

133-58-5-18/31

Mastering of the Production of Alloy Tubes of Boiler Installations
with High and Super High Steam Parameters

S. P. Artyukhov, G. G. Kudryumova and M. S. Pishchik,
Engineers. From TuTZ: I. I. Zuyev, G. G. Vinnichenko,
I. Yu. Korobochkin, A. Ya. Dergach, O. S. Vil'yams,
N. M. Bol'shova, N. A. Yakimenko, N. S. Kirvalidze,
M. I. Nechiporenko, I. E. Romanyuk and A. F. Romanets,
Engineers; from the Lenin Works: N. M. Glukhman and
B. N. Zaslavskiy, Engineers.
There is one table.

ASSOCIATION: Vsesoyuznyy n.-i. trubnyy institut.
(All-Union Scientific-Research Tube Institute)

Card 2/2

25(2)

PHASE I BOOK EXPLOITATION

SOV/2860

Borisov, Sergey Ivanovich, Doctor of Technical Sciences

Proizvodstvo trub na ustanovkakh s avtomaticheskimi i pilgrimovymi stanami (Seamless Tubing Manufacture on Plug-rolling and Pilger Mills) Khar'kov, Metallurgizdat, 1959. 330 p. Errata slip inserted. 3,200 copies printed.
Ed.: Yu. I. Nikolayevskiy; Ed. of Publishing House.
S. S. Liberman and Ye. K. Sinyavskaya; Tech. Ed.: S. P. Andreyev.

PURPOSE: The book is intended for production engineers, designers, and scientific personnel. It may also be useful to students specializing in tube manufacture.

COVERAGE: Two methods of manufacturing tubes on Pilger and plug-rolling mills are evaluated. A comparison of processing by both methods is made and conclusions regarding the expediency of using one or the other method for certain conditions are given. The advantages and shortcomings of both methods, the attainable productivity, accuracy, and means for increasing tube quality

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Seamless Tubing Manufacture (Cont.)

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are discussed. No personalities are mentioned. There are 36 references: 24 Soviet, 6 English and 6 German.

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AVAILABLE: Library of Congress	

Card 6/6

GO/jmr
1-19-60

BORISOV, S.I., doktor tekhn.nauk; OSTRIN, G.Ya., inzh.

All-Union Conference of Pipe Mill Workers. Met. 1
gornorud. prom. no.4:85-87 JI-Ag '62. (MIRA 15:9)

1. Ukrainskiy nauchno-issledovatel'skiy trubnyy institut.
(Pipe, Steel—Congresses)

BORISOV, S.I., assistant

Discovery of the isochronism of the cycloid by Christiaan
Huygens. Trudy MIIAIIK no.50:71-78 '62. (MIRA 16:7)

1. Kafedra vysshey matematiki i teoreticheskoy mekhaniki
Moskovskogo instituta inzhenerov geodezii, aerofotos"yenki i
kartografii.

(Cycloids)

BORISOV, S.I., doktor tekhn. nauk; BLIZHYUKOV, Ye.A., inzh.

Contact surface of the blank and the friction tool in the manufacture of hollow, periodic sections by transverse and helical rolling. Proizv. trub no.10:36-41 '63.

Optimal conditions for transverse and helical rolling of hollow periodic sections. Ibid.:41-49 (MIRA 17:10)

ACCESSION NR: AR4027680

S/0276/64/000/001/V038/V038

SOURCE: RZh. Tekhnologiya mashinostroyeniya, Abs. 1V237

AUTHOR: Borisov, S. I.; Eliznyukov, Ye. A.; Goryun, A. P.; Vereshchagin, A. D.

TITLE: Machine tool with programmed control for production of hollow periodic profiles by transverse-screw rolling

CITED SOURCE: Sb. Trubn. proiz-vo Ukrainy*. Kiyev, 1963, 44-51

TOPIC TAGS: periodic profile, automatic machine tool, profiling machine tool, hollow profile, profile machining, hollow periodic profile machining

TRANSLATION: The Ukrainian Scientific Research Institute of Piping has constructed a machine tool with program control for the rotational hot or cold extrusion of hollow profiles used as blanks in the production of conical shells and other thin-walled products with a periodic longitudinal profile. The idling rollers or other tools connected to the shafts of the compression device hydraulic cylinders symmetrically approach and retreat from the axis of the machined part, deforming the blank. At the same time, the working tool together

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ACCESSION NR: AR4027680

with the movable carriage moves along the axis of the blank, successively deforming portions of the longitudinal profile throughout its length. It is possible to regulate the wall thickness and its variations over the length of the product. 5 illustrations. A. Boshevskiy.

DATE ACQ: 03Mar64

SUB CODE: ML

ENCL: 00

Card 2/2

BORISOV, S.I., doktor tekhn. nauk

Improving the quality of seamless and electrically welded pipe.
Met. i gornorud. prom. no.4:40-42 J1-Ag '64.

(MIRA 18:7)

S/0000/64/000/000/0350/0355

ACCESSION NR: AT4030818

AUTHOR: Borisov, S. I.; Pritomanov, A. Ye.

TITLE: Analytic method of determining the forces in extruding steel pipes

SOURCE: Nauchno-tekhnicheskaya mezhvuzovskaya konferentsiya po inzhenerny^m metodam raschetov tekhnologicheskikh protsessov obrabotki metallov davleniyem. Sverdlovsk, 1961. Inzhenerny^e metody* rascheta tekhnologicheskikh protsessov obrabotki metallov davleniyem (engineering methods in calculating technological processes of metal working by pressure); Doklady* konferentsii. Moscow, Metallurgizdat, 1964, 350-355

TOPIC TAGS: steel pipe, extrusion, tangent stress, deformation

ABSTRACT: The authors state that for an extraction coefficient of 16-22, the extrusion process is conducted isothermally. An increase of carbon content in hypoeutectoid steel reduced the hardening of the metal. Experimental research was conducted on the relation of conditions during the extrusion of steel tubes to the basic technological parameters of the process. Tenzometric methods (Abstractor's note: by a device for measuring deformation of loaded mechanisms) were employed for extrusion measurements. The extrusion of tubes having a diameter of 38-70 mm and a wall thickness of 1.5-12 mm made of 10, 20, 35, Kh18N10T, Kh257, and other

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ACCESSION NR: AT4030818

steels were made within 10 to 57 range of extraction coefficient. About 1000 measurements were made from 61 extrusion variants. It was shown that deviations did not occur in excess of 10% for 81% of the entire test. Orig. art. has: 2 figures and 11 formulas.

ASSOCIATION: none

SUBMITTED: 30Oct63

SUB CODE: ML

DATE ACQ: 06Apr64

NO REF SOV: 005

ENCL: 00

OTHER: 000

Card 2/2

CHEKMAREV, A.P., akademik, nauchn. red.; BORISOV, S.I., doktor
tekhn. nauk, nauchn. red.; MATVEYEV, Yu.M., doktor
tekhn. nauk, nauchn. red.

[Technical progress of the pipe industry] Tekhnicheskii
progress v trubnom proizvodstve. Moskva, Metallurgiya,
1965. 263 p. (MIRA 18:7)

1. Akademiya nauk Ukr.SSR (for Chekmarev).

L 4939-66 EWT(d)/EWT(m)/EWA(d)/EWP(v)/EWP(t)/EWP(k)/EWP(h)/EWP(z)/EWP(b)/EWP(l)/EWA(c)

ACC NR: AT5021676 JD/HW/GS

SOURCE CODE: UR/0000/65/000/000/0033/0040

AUTHOR: Borisov, S. I.^{44, 55} (Doctor of technical sciences, Meritorious scientist of science and technology UkrSSR) 26
24
341

ORG: none

TITLE: Important scientific research work assuring growth of hot-rolled seamless pipe production in the coming years 10, 4, 55

SOURCE: Tekhnicheskij progress v trubnom proizvodstve (Technical progress in pipe production). Moscow, Izd-vo Metallurgiya, 1965, 33-40

TOPIC TAGS: pipe manufacture, pipe industry, steel pipe, pipe mill / 30 102 continuous pipe mill

ABSTRACT: Of 10 million tons of pipe produced in 1965 in the SSSR, 9 million will have been made of steel. By 1970 the production of steel pipes should reach 15-16 million tons and be equivalent to U.S. production. A discussion of the vital developments and scientific research areas which will assure growth of the steel pipe industry in the coming years is presented. Besides the reconstruction of 5-10, 6-12, and 8-16 "pilger" mills, construction of new 4-10, 5-12, 6-12, and

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L 4939-66

ACC NR: AT5021676 2

10-24 mills must be undertaken. Major research efforts should be directed towards development of continuous repair techniques, preparation of blanks, automation, thin pipe technology, heat treatment, etc. During the next five years only one new automatic mill is contemplated, but a program of reconstruction of existing equipment which will result in the desired increase in output is planned. In addition to the above research efforts, development of techniques for rolling two pipes simultaneously is recommended. Since pipe extrusion is a comparatively recent development (1958), research in many areas (including development of techniques for extruding profiled and bimetallic pipes, extrusion lubrication, alloy steel extrusion) and development of a 15-20 000-ton press are recommended. The recent construction of a continuous output mill (mill 30-102) which is unique in the world with respect to degree of mechanization and instrumentation has provided a number of urgent research areas including elimination of construction deficiencies (elimination of unstable operation), achieving full design capacity, coordination of continuous and intermittent acting machinery, etc.

SUB CODE: IE/ SUBM DATE: 14Apr65/

60
Card 2/2

L 04313-67 EWP(k)/EWP(h)/EWT(d)/EWP(l)/EWP(v)/EWP(t)/ETI IJP(c) JD/FW
 ACC NR: AP6018389 (A) SOURCE CODE: UR/0133/66/000/006/0537/0538

AUTHORS: Borisov, S. I. (Doctor of technical sciences); Verkhovod, V. K. (Engineer);
 Samoylenko, V. A. (Engineer); Bogatyrev, V. A. (Engineer)

ORG: none

TITLE: Manufacture of eight-finned steel pipes on hydraulic horizontal presses

SOURCE: Stal', no. 6, 1966, 537-538

TOPIC TAGS: metal tube, metal pressing, metal press, metal forming

ABSTRACT: A method for the manufacture of finned steel pipes (for the chemical industry) by using horizontal hydraulic presses was developed at the Southern Pipe Plant Nikopol' (Nikopol'skiy yuzhnotrubby zavod). The experimental work was based on theoretical calculations published earlier by V. K. Verkhovod, A. Ye. Pritomanov, and M. I. Chepurko (Issledovaniye protsessa istecheniya metalla pri pressovanii profil'nykh trub, Sb. Proizvodstvo trub, vyp. 14, Izd. Metallurgiya, 1964). The compression stress was calculated after S. I. Borisov and A. Ye. Pritomanov (Analiticheskiy metod opredeleniya usiliya pressovani stal'nykh trub, Sb. Proizvodstvo trub, vyp. 5, Metallurgizdat, 1961) with the formula

$$P = \left[(\sigma_M - \sigma_T k) e^{\frac{4D_k L_{r.3}}{D_k^2 - d_T^2}} + \sigma_T k \right] F_1$$

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UDC: 621.774.38

ACC NR: AP6018389

6
where σ_M is the tension at the die, σ_T - flow limit of the pipe material, k - a coefficient which depends on the elongation coefficient, f - friction coefficient, D_K - container diameter (175 mm), $L_{r.3}$ - length of compressed bushing, d_T - inner pipe diameter, and F - cross-sectional area of compressed bushing. It was found that the theoretically calculated compression stresses were in good agreement with the experimental data. A schematic of the construction and calibration of the dies is presented (see Fig. 1). A recent order for 48 x 4 mm (with 105-mm fin diameter) pipes has been successfully completed. V. S. Nosko, A. I. Lysenko, O. P. Drobich, A. I. Tyazhel'nikov, N. S. Kirvalidze, and N. S. Yakimenko participated in the experimental work.

SUB CODE : 13 / SUB DATE : none / ORIG REF : 002

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L 04313-67
ACC NR: AP6018389

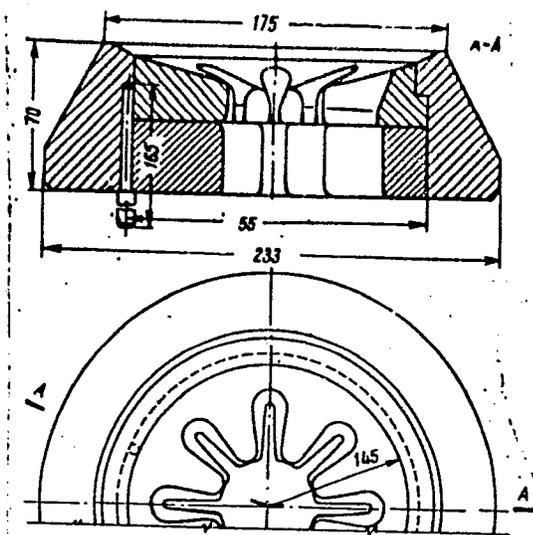


Fig. 1. Construction and calibration of profile die.

Orig. art. has: 3 graphs and 5 equations.

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 002

Card 3/3 *gd*

VOLOTKOVSKIY, S.A., professor; Belykh, B.F., kandidat tekhnicheskikh nauk; BORISOV, S.K., inzhener.

[Electrical equipment of single-bucket excavators] Elektricheskoe oborudovanie odnokovshevykh ekskavatorov. Moskva, Ugletekhizdat, 1953. 370 p.

(MLRA 6:12)

(Excavating machinery)

BORISOV, S.K., inzhener.

Direct-current drive for the ESh-4/40 walking excavator. Elektri-
chestvo no.5:77-81 My '56. (MLRA 9:8)

1. Novokramatorskiy mashinostroitel'nyy zavod imeni Stalina.
(Excavating machinery--Electric driving)

BORISOV, S. M., Cand Tech Sci -- (diss) "Study of Pneumatic Chamber
Friction Clutch ^{as of} Single-Motor Excavators." Mos, 1957. 16 pp (Min
of Higher Education USSR, Mos Order of Labor Red Banner Engi-
neering-Construction Inst im V. V. Kuybyshev), 110 copies (KL,
48-57, 106)

- 26 -

DORISOV 2176

*5
2*

Distr: 4E2b/4E2c

18
Vacuum melting apparatus for remelting of magnesium
18
~~V. G. Gusakov, I. D. Tsaregradsky, and S. M. Borisov~~
U.S.S.R. 107,522, Sept. 25, 1957. An app. for obtaining
99.99% pure Mg is described.
M. Hoesch

11
18

BOBISOV 3/11

✓ Protecting vacuum pumps. V. V. Sergeev and S. M. Borisov. U.S.S.R. 109,163, Dec. 25, 1957. Traps charged with CaCl_2 and Mg shavings are placed between the separator retort and the vacuum pump to protect the latter from water and acid vapors in the treatment of Ti sponge.

27 M. Hosh.

11

gk

4

BORISOV, S.M., inzhener.

Distribution of specific pressures in friction coupling air chamber
blocks. Stroi. i dor. mashinostr. no.2:5-7 F '57. (MLRA 10:3)
(Couplings) (Excavating machinery)

BORISOV, S.M., inzhener.

Investigating pneumatic tube friction clutches. [Trudy] VNIISTroi-
dormash no.15:5-41 '57. (MIRA 10:6)
(Clutches (Machinery))

SOV/122-59-3-3/42

AUTHOR: Borisov, S.M., Candidate of Technical Sciences

TITLE: On the Design Analysis of Torque Limiting Safety Clutches with Pneumatic Rubber Tube Actuation (0 raschete predokhranitel'nykh pnevmokamernykh muft)

PERIODICAL: Vestnik Mashinostroyeniya, 1959, Nr 3, pp 11-14 (USSR)

ABSTRACT: Safety clutches of the brakeshoe type, actuated by air pressure admitted to a rubber hose ring inside the ring of friction pads, have been successful in reducing dynamic peak load in E-302 and E-5010 excavators. Tests on a special rig reported earlier by the present author (symposium of VNIISTroydormash, Issue 15, Mashgiz, 1957) have proved the accurate torque limitation achieved as illustrated by a typical oscillogram in Fig 2. The ratio of the maximum and minimum torques at which slipping occurs is said to be about 1.08 at a constant temperature and 1.3 when temperature variations of 30-250°C are included. Some relations for the design analysis are given, applied to a clutch with friction pads, each guided by and disengaged by leaf springs. Fig 5 is a family of curves for a factor by which the

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SOV/122-59-3-3/42

On the Design Analysis of Torque Limiting Safety Clutches with
Pneumatic Rubber Tube Actuation

friction torque is multiplied to take account of the
uneven distribution of radial pressure. The factor is
plotted against the arc of the pad for different values
of the friction coefficient.

There are 5 figures, and 5 Soviet references.

Card 2/2

BORISOV, Sergey Mikhaylovich, kand. tekhn. nauk; DEGTYAREV, A.P., inzh.,
retsenzent; GORYACHEVA, T.V., inzh., red.; DOBRTSYNA, R.I.,
tekhn. red.

[Single-bucket universal construction excavators] Odnokovshovye
universal'nye ekskavatory. Moskva, Gos. nauchno-tekhn. izd-vo
mashinostroit. lit-ry, 1961. 210 p. (MIRA 14:9)
(Excavating machinery)